A POSTERIOR INCISION IN CERTAIN APPENDICITIS OPERATIONS.

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THE operation that I shall describe is one in which the appendix is reached through Petit's triangle. A vertical incision is made along the outer border of the latissimus dorsi and extends from the crest of the ilium upward. This exposes the outer border of the quadratus lumborum and the lumbar fascia and aponeurosis of the transversalis, which extend anteriorly from the outer border of the muscle. The second incision is made transversely, close to the iliac crest, through the lumbar fascia and transversalis, exposing the parietal peritoneum directly over the ascending colon and cæcum.

A glance at the anatomy and pathology of the appendix will show that the foregoing method of operative procedure may be especially advantageous in treating an inflamed appendix or its most frequent complication, a localized abscess. The appendix, cæcum, and ascending colon lie on the posterior parietal peritoneum. The outer border of the quadratus lumborum muscle overlaps the inner one-half of the ascending colon, while the outer portion of this viscus projects beyond the border of the muscle into the triangle of Petit. The appendix, in the majority of cases, is found behind the cæcum, with its tip pointing upward. When the patient is lying in a straight position, the appendix is below the line of incision; but I have found that when the patient is placed in the lateroprone position, with a large pad under the loin, the cæcum protrudes into the angle between the crest of the ilium and the outer border of the quadratus lumborum muscle.

In cases with pus formation, the abscess is found directly in contact with the cæcum (Bloodgood [1] reports a case, contrary to this statement, which will be discussed later), and can be opened more quickly, more easily, and with less danger, through a posterior incision than by any other route. Posterior drainage, as herewith advised, opens the abscess in the most dependent part, and thoroughly drains retroperitoneal infection. In chronic cases, with many and firm adhesions, I have found the operation, through the posterior incision, easier and more rapid than when the incision is made as is ordinarily advised. In this connection, I refer to operations for removal of the appendix. Of course, if operation is required for intestinal obstruction, following adhesions, the posterior incision would in most cases be inadequate and should not be advised.

Description of the Operation.—Position of the patient. The patient is placed on the left side and a large support put under the left loin. This brings the right loin into a favorable position for operation, and lengthens the distance between the right costal arch and the iliac crest. It also brings the appendix nearer the incision by depressing the right side of the pelvis.

The incision. An incision is made from a point one-half an inch behind the highest point of the crest of the ilium towards the tip of the twelfth rib. The length of the incision depends on the obesity and the body form of the patient. The anterior border of the latissimus dorsi muscle is located, freed by blunt dissection, and retracted posteriorly. This exposes the outer border of the quadratus lumborum muscle, the lumbar fascia, and the aponeurosis of the transversalis. A transverse incision, one-half to one inch above the crest of the ilium, is then made. This incision begins at the outer border of the quadratus lumborum and extends forward, parallel to the fibres of the transversalis, as far as is necessary to secure sufficient room to operate quickly. I usually separate the fibres of the transversalis by blunt dissection. The subperitoneal fat, which, in some cases, is quite abundant, is pushed aside with the finger covered with a piece of gauze. The peritoneum is opened near the forward part of the incision and the peritoneal incision enlarged in a posterior direction. On opening the peritoneum, the cæcum presents itself in the wound. The remainder of the operation does not require description. In cases where drainage is not necessary, the wound is sutured, in layers, with catgut and silkworm gut.

The vessels and nerves, in relation to the field of operation, are as follows:

The iliac branch of the iliohypogastric nerve pierces the external oblique and is anterior to the line of incision. The main trunk of the iliohypogastric lies above the incision in the transversalis in most cases. Its course is parallel to the fibres of the transversalis; and, if the fibres of the transversalis are separated by blunt dissection, the nerve is not injured. The ilioinguinal follows the same direction as does the iliohypogastric, and is avoided in the same manner. The anterior branch of the last dorsal nerve is, at the site of the operation, internal to the transversalis and is a considerable distance above the transverse incision. The lateral cutaneous branch of the last dorsal nerve is given off anteriorly to the posterior border of the external oblique, and is not in the operative field.

There are no arteries or veins of sufficient size or importance close to the incision. I have never found it necessary to ligate a vessel in doing this operation; and seldom has it been necessary to use hæmostats to check temporary bleeding.

Advantages of the Method.—In clean cases, the operation has few advantages over the method ordinarily employed. In obese cases the posterior operation is more rapid, and is less likely to be followed by hernia. In all cases, I have found the operation, as herewith described, followed by less shock and abdominal distress than a laparotomy through an anterior incision.

In cases with abscess formation, and in all cases requiring drainage, I have found operation through the posterior incision preferable to the old method. The abscess is opened in the most dependent part, and the infected area is reached and treated without coming in contact with the omentum or small intestines. Retroperitoneal infection, which is quite a common and, according to Stone,[1] serious complication, is drained much more efficiently than is possible through an anterior incision. It has been my experience that infected cases, when drained by the posterior operation, heal very rapidly as compared with similar cases drained anteriorly. When a posterior incision is used, patients can be permitted to leave the bed at an earlier date, and with less liability to postoperative hernia, than if they had been operated through an anterior incision. It is seldom that herniæ follow operations for appendicitis through an anterior incision, but they do occur. I have had one case, a pus case drained anteriorly. Taylor [2] and Rodman [3] each report a case of hernia following clean operations.

Disadvantages of the Method.—I have operated on fifty-eight cases by this method and have found no disadvantages. During my first cases, I was fearful that I should experience great difficulty in operating on patients in whom the cæcum and appendix were fixed by a short mesentery. I have operated two such cases by the posterior method, and found the operation less difficult than are operations on similar cases through an anterior incision.

J. C. Bloodgood [4] reports a suppurative case that would not be suitable for the posterior incision. In this patient the abscess was between the folds of the mesentery of the small intestines. These cases, doubtless, are very rare, and are exceptions to the rule.

REFERENCES.

[1] J. S. Stone. Southern Surgical and Gynæcological Society, Atlanta, Georgia, December 15, 1903.

[2] W. J. Taylor. Transactions of the Philadelphia Academy of Surgery, October 5, 1903.

[3] W. L. Rodman. Ibid.

[4] J. C. Bloodgood. The American Journal of the Medical Sciences, October, 1903.